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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/591,289

08/31/2006

Harald Hager

7601/88288

9193

66991

7590

07/25/2011

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EXAMINER

LEONARD, MICHAEL L

ART UNIT

PAPER NUMBER

1763

MAIL DATE

DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/591,289	<b>Applicant(s)</b> HAGER ET AL.	
	<b>Examiner</b> MICHAEL L. LEONARD	<b>Art Unit</b> 1763	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2011.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 61-80 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 61-80 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>04/21/2011; 01/30/2011</u> .                                  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 01/30/2011 has been entered.

### ***Double Patenting***

Applicants' request for abeyance is acknowledged to the extent that applicants' lack of response to the cited rejection will not be treated as non-responsive. However, since the rejection is still proper it will be maintained until such time as a proper response to it is filed or conditions appropriate for removal of the rejection are present.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 61-80 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

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Upon applying this test to claims 1-9 it is believed that undue experimentation **would** be required because In re Wands has 8 criteria:

- (A)The breadth of the claims;
- (B)The nature of the invention;
- (C)The state of the prior art;
- (D)The level of one of ordinary skill;
- (E)The level of predictability in the art;
- (F)The amount of direction provided by the inventor;
- (G)The existence of working examples; and
- (H)The quantity of experimentation needed to make or use the invention based on the content of the disclosure.

It is noted that the instant claims read on all potential plastic matrices (component a) which encompasses an infinite number of plastic bodies, plastic semifinished products, etc. (Wands factor A). The specification does not describe how to make all such plastic matrices nor how to select suitable reactants from the infinite list thereof which will function as required in the instant invention (Wands factors F, G). It would require an infinite amount of experimentation to determine how to make all of the modifications encompassed by the instant claims and another infinite amount of experimentation to determine which of these plastic matrices would function in the instantly claimed invention as required (Wands factor H). Chemistry is an unpredictable art (Wands factor E). The ordinary skilled artisan has not imagined nor figured out how to make all of the plastic matrices encompassed by the instant claim (Wands factors C,

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D, E, F, G, and H). The enabling disclosure is not commensurate with the full scope of the claimed "plastic matrix".

***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 76-79 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Pub No. 2003/0130381 to Joachimi et al. in view of U.S. Patent No. 6,620,872 to Fisher.

As to claim 76, Joachimi discloses a method for producing a laser weldable, transparent material that is produced by mixing (A) polymer and (B) IR-absorbing compounds in an extruder – encompasses "high shear" (Abstract; paragraphs 28 and 118). Component (B) is present between 0.001 to 0.1 wt% and may comprise any IR-absorbing compounds (00028) however, there is no mention of the claimed metal-oxide compounds or 1 to 500 nanometer particles sizes.

Fisher discloses a transparent material that is produced by mixing (A) polymer and (B) IR-absorbing agents (Abstract; column 2, line 63-Column 3, line 22). In particular, component (B) has a particle size between 5 and 200 nanometers and preferably consists of indium-tin oxide (ITO) or antimony-tin oxide (ATO) alone or in combination with lanthanum hexaborides - which are IR-absorptive (Column 3, lines 5-30).

Therefore it would have been obvious include the ITO or ATO IR-absorbing particles of Fisher in the process for producing the laser weldable transparent material

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of Joachimi since they are disclosed as being preferred for analogous polymer systems containing IR-absorbing particles and it is prima facie obvious to add a known ingredient to a known composition for its known function. *In re Lindner* 173 USPQ 356; *In re Dial et al* 140 USPQ 244.

The amount of ITO or ATO disclosed by Fisher sits outside of the claimed range, however, Joachimi discloses IR-absorbing materials that fall inside the claimed range, therefore, it is the examiner's position that the amount of IR-absorbing material is result effective variable that further depends on the polymer employed because changing the amount will clearly affect the type of product obtained. See MPEP § 2144.05 (B). Case law holds that "discovery of an optimum value of a result effective variable in a known process is ordinarily within the skill of the art." See *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). In view of this, it would have been obvious to one of ordinary skill in the art to optimize the amount of IR-absorbing material while maintaining acceptable IR absorption dependent upon the polymer employer including those within the scope of the present claims so as to produce desired end results.

As to claims 77-78, Fisher discloses suitable indium-tin and antimony-tin oxide particles useful as IR-absorbing materials in polymer systems (Column 3, line 27).

As to claim 79, while Fisher discloses indium-tin oxide, patentee fails to explicitly mention blue indium-tin oxide. Given that there is a small, mutually-exclusive, mutually-exhaustive list consisting of the types of indium-tin oxide--yellow (stoichiometric) and blue (non-stoichiometric)--for one with ordinary skill in the art, it would have been obvious to try blue indium-tin oxide.

Claims 61-75 and 80 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Pub No. 2003/0130381 to Joachimi et al. in view of U.S. Patent No. 6,620,872 to Fisher and U.S. Patent Pub. No. 2004/0030384 to Wissman.

As to claim 61, as discussed above, Joachimi in view of Fisher render obvious a laser weldable material that is produced by mixing (A) polymers - such as polymethacrylates - and (B) light-absorbing IR-particles, however, Joachimi fails to teach a suitable method of laser welding said transparent material to various substrates.

Wissman also discloses laser-weldable material based on (A) polymer and (B) light- absorbing particles, wherein (A) comprises polymethacrylate polymers (Abstract; paragraph 10). In particular, Wissman teaches that the joining face of weldable material is exposed to laser light, then placed next to the join face of the other weldable material (Paragraph 11).

Therefore, it would have been obvious to utilize the laser welding methodology of Wissman for the composition of Joachimi et al since Wissman teach it is suitable for polymethacrylate base resins - the same as Joachimi et al.

As to claim 62, the plastic material is a molded part (Abstract of Wissman and Joachimi).

As to claim 63, Joachimi in view of Fisher render obvious (B) having a particle preferably between 10 and 30 nanometers - wherein (B) comprises between 0.001 to 0.1 wt% of (A) + (B) (Joachimi; paragraph 28; Fisher; col 3 lines 31).

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As to claims 64-67, 72-75, and 80, Joachimi discloses wherein component (A) comprises polymethacrylate, polyamide, and/or bisphenol-A-polycarbonate (paragraph 33).

As to claims 68-69 and 71, Joachimi in view of Fisher render obvious component (B) having a particle preferably between 10 and 30 nanometers - wherein (B) comprises between 0.001 to 0.1 wt% of (A) + (B) (Joachimi, 0028; Fisher; col 3 lines 31).

As to claim 70, while Fisher discloses indium-tin oxide, patentee fails to explicitly mention blue indium-tin oxide. Given that there is a small, mutually-exclusive, mutually-exhaustive list consisting of the types of indium-tin oxide--yellow (stoichiometric) and blue (non-stoichiometric)--for one with ordinary skill in the art, it would have been obvious to try using blue indium-tin oxide.

### ***Response to Arguments***

Applicant's arguments with respect to claims 61-80 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL L. LEONARD whose telephone number is (571)270-7450. The examiner can normally be reached on Mon-Fri 7:00-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on 571-272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/MICHAEL L LEONARD/  
Examiner, Art Unit 1763